

DARUL HUDA EXAMINATION BOARD
ANNUAL EXAMINATION – APRIL 2020

Time: 2hr(s)

Sub: MATHEMATICS

Marks: 100

Std: II

SECTION A

I) MULTIPLE CHOICE QUESTION

(Each question carries 1 mark) 9x1=9

1. The number _____ is neither a positive nor a negative rational number

a) 0

b) 1

c) $\frac{1}{1}$ c) $\frac{0}{1}$

2. The total measure of the three angles of a triangle is

a) 60° b) 90° c) 180° d) 120°

3. The distance around a circular region is known as its

a) area

b) perimeter

c) circumference

d) surface area

4. Any expression with one or more terms is called

a) monomial

b) binomial

c) polynomial

d) trinomial

5. $a^m \times a^n = \dots$

a) a^{m+n} b) a^{m-n} c) a^{mn} d) a^m

6. 0.07 is equal to

a) 70%

b) 7%

c) 0.7%

d) 0.07%

7. A cricket bat was purchased for 800 and was sold for 1600 then profit is

a) 100%

b) 64%

c) 60%

d) 50%

8. What is the quotient when a non-zero rational number is divided by its additive inverse

a) 0

b) -1

c) 1

d) none of these

9. Ratio of 3km to 300m is

a) 30:3

b) 3 : 30

c) 10 : 1

d) 5: 1

SECTION B

(Each question carries 1 mark)

5x1=5

II) Fill in the blanks

9. The exterior angle is equal in measure to the sum of

10. The term which have different algebraic factors are called

11. To divide one rational number by the other rational number we multiply the rational number by.....

12. The additive inverse of $\frac{14}{5}$ is

13. Percentage is divided from the latin word 'per centum' meaning

III) Match the following

5x1=5

14. $\frac{3}{5}$

a) 0

15. $\frac{-2}{3}$

b) {100}

16. Circle

c) 60%

d) circumference

17. Area

e) $\frac{10}{-15}$

f) 1

18. a^0

g) surface area

SECTION C

(Each question carries 5marks)

8x5=40

IV) Answer any Eight of the following

19. Find the ratio of

a) 15 kg to 210 g

b) ₹5 to 50 paise

c) 9m to 27 cm

d) 30days to 36 hours

20. Convert the given decimal fraction to per cents

a) 0.65

b) 2.1

c) 0.02

d) 12.35

21. The population of a city decreases from 25,000 to 24,500. Find the percentage decrease ?

22. Find the sum

a) $\frac{5}{4} + \frac{-11}{4}$

b) $-2\frac{1}{3} + 4\frac{3}{5}$

c) $\frac{5}{3} + \frac{3}{5}$

d) $\frac{-3}{11} + \frac{5}{9}$

23. Construct an equilateral triangle of side 5.5 cm?

24. Find the area of a square park, whose perimeter is 320m?

25. Diameter of a circular garden is 9.8. Find its area?

26. Add $-3mn, -5mn, 8mn, -4mn$ Subtract $-6xy$ from $12xy$ 27. Find the value of following expression when $x=-1$

a) $2x-7$

b) $-x+2$

c) x^2+2x+1

d) $2x^2-x-2$

28. Express each of the following numbers using exponential notation

a) 512

b) 343

29. Write four more number in the following pattern.

$$\frac{-1}{3}, \frac{-2}{6}, \frac{-3}{9}, \frac{-4}{12}$$

30. What is the circumference of the circle of diameter 10cm ($\pi=3.14$)

SECTION D**(Each question carries 5 marks)****V) Answer any four of the following****4x5=20**

31. Rahul bought a sweater and saved ₹20 when a discount of 25% was given. What was the price of the sweater before the discount?

32. Draw the number line and represent the following rational numbers on it.

a) $\frac{-5}{8}$ b) $\frac{-7}{4}$ c) $\frac{3}{4}$ d) $\frac{7}{8}$ e) $\frac{4}{2}$

33. Construct an isosceles triangle in which the lengths of each of its equal sides is 6.5cm and the angle between them is 110°

34. A wire is the shape of a rectangle. Its length is 40 cm and breadth is 22 cm. if the same wire is rebent in the shape of a square, what will be the measure of each side, also find which shape encloses more area?

35. Subtract $24ab-10b-18a$ from $30ab+12b+14a$

36. Express the following numbers in standard form.

a) 5,00,00,000 b) 70,00,000 c) 3,90,878
d) 65,950 e) 5985.3

SECTION E**(Each question carries 7 marks)****VI) Answer any three of the following****3x7=21**

37. Tell what is the profit or loss in the following transactions. Also find profit per cent or loss per cent in each case.

- a) A shirt bought for ₹250 and sold for ₹ 325
- b) A refrigerator bought for ₹12,000 and sold at ₹13,500
- c) A cupboard bought for ₹2,500 and sold at ₹3,000
- d) A skirt bought for ₹250 and sold at ₹150

38. Express the following terms in the exponential form.

a) $(2 \times 3)^5$ b) $(2a)^4$ c) $(-4m)^3$ d) $(5a)^2$

39. a) What should be added to $x^2 + xy + y^2$ to obtain $2x^2 + 3xy$?

b) What should be subtracted from $2a + 8b + 10$ to get $-3a + 7b + 16$

40. a) Construct $\triangle LMN$, right - angled at M , given that $LN=5$ cm and $MN=3$ cm.

b) Construct $\triangle XYZ$ if it is given that $XY=6$ cm, $m\angle ZXY=30^\circ$ and $m\angle XYZ=100^\circ$